components or a central location in the network store
lists containing the addresses of a plurality of
gateways. In searching for a free gateway, that is to
say one which is not yet fully utilized, a client
5   component successively contacts all gateways which are
held on the list until a gateway with sufficient
(residual) capacity has been found. Such lists
containing the available resources in the network are
administered from a central location in the network. In
10   the event of changes to the network topology or in the
event of changes relating to the available resources,
the list is changed and is then made available to the
client components again in updated form.

15   In the packet-switching communication networks
customary today, the resources are usually software
applications which run on PC hardware. In this case, a
plurality of resources may also have been installed on
one common piece of PC hardware. The software
20   applications access installed hardware components of
the PC. By way of example, ISDN cards are used for
connections to the circuit-switching communication
network ISDN, sound cards are used for inputting and
outputting audio information etc. As soon as a PC has
25   the respective hardware components, it can provide the
desired resource in the network for use by the other
communication components in the communication network
by installing an appropriate piece of software.

30   The known communication networks have been found to
have the drawback that resources are not available in a
required number in the network. Permanently monitoring
the utilization level of the various resource types,
additionally installing further resources and
35   uninstalling excessive resources entail a high level of
complexity, which is often manual.

It is an object of the invention to optimize the
provision of resources in networks and at the same time
to reduce the complexity for administration in the
networks.

5

This object is achieved for a method by the features
specified in claim 1.

To achieve this object, a service checks the hardware
10   of at least one of the communication components for
whether a piece of software can provide a resource on
this communication component,
and if the result of the check is positive this
resource-specific software is transferred to this
15   communication component and the resource is provided
for use. This copies resources of a frequently used
type frequently, and these resources provided again use
hardware which is already present in the network but
has not been used to date. Communication components
20   which are not utilized to the full extent are
automatically equipped with software, which means that
free capacities can be used appropriately.

The features of the subclaims advantageously provide
25   further refinements of the invention.

The communication component may be checked permanently
as a background process if the service is installed as
software on the communication component which is to be
30   checked.

Frequently used resources are increasingly set up in the network by virtue of the service, upon use of the resource on a first communication component by a second communication component, checking this second
5   communication component for whether this second communication component can also provide this resource, and if the result of the check is positive it initiates the transfer of this software from the first communication component to the second communication
10   component.

The communication components are occupied only by resources which are actually used, whereas the software for resources which are used rarely or not at all is
15   deactivated or uninstalled and is reactivated or reinstalled when needed again. In this case, it is possible to define that the last instance of a resource which is present in the network is not uninstalled.

20   The uncontrolled spread of unwanted resources is prevented by virtue of software being transferred on the basis of authorizations and/or limiting.

If the authorizations are provided by the user of the
25   communication component which transfers the software and/or by the user of the communication component which receives the software, the users themselves make decisions about the type of the use of the communication components.
30

It is possible to observe licensing limits and to control the number of installed instances of resources by virtue of the limiting being provided by a prescribed
35

Patent Claims

1.   A method for providing resources in communication
networks,
5 particularly   in   packet-switching   communication
networks, having communication components (A, B1 -
B6, C1 - C6, D1 - D6) which use resources in the
network and/or which provide resources in the network
for use,
10 where the resources are provided by a piece of software
running on the communication components (A, B1 -
B6, C1 - C6, D1 - D6), and
where the software accesses the hardware of the
communication components (A, B1 - B6, C1 - C6, D1 -
15 D6),
characterized
in that a service checks the hardware of at least one
of the communication components (A, B1 - B6, C1 - C6,
D1 - D6) for whether a piece of software can provide a
20 resource on this communication components (A, B1 -
B6, C1 - C6, D1 - D6),
and in that if the result of the check is positive this
resource-specific software is transferred to this
communication component (A, B1 - B6, C1 - C6, D1 - D6)
25 and the resource is provided for use.

2.   The method as claimed in claim 1,
characterized
in that the service is installed as software on the
30 communication component (A, B1 - B6, C1 - C6, D1 - D6)
which is to be checked.

3.   The method as claimed in one of the preceding
claims,
characterized
in that the service, upon use of the resource on a
5   first communication component (D1) by a second
communication component (A), checks this second
communication component (A) for whether this second
communication component (A) can also provide this
resource, and if the result of the check is positive it
10 initiates the transfer of this software from the first
communication component (D1) to the second
communication component (A).

4.   The method as claimed in one of the preceding
15 claims,
characterized
in that the software for resources which are used
rarely or not at all is deactivated or uninstalled and
is reactivated or reinstalled when needed again.
20

5.   The method as claimed in one of the preceding
claims,
characterized
in that software is transferred on the basis of
25 authorizations and/or limiting.

6.   The method as claimed in claim 5,
characterized
in that the authorizations are provided by the user of
30 the communication component (D1) which transfers the
software and/or by the user of the communication
component (A) which receives the software.

7.   The method as claimed in claim 5 or 6,
characterized
in that the limiting is provided by a prescribed
maximum number of software licenses on the software
5   which is to be transferred.

8.   The method as claimed in one of the preceding
claims,
characterized
10   in that the service formed by a piece of software with
a first release compares the release upon finding a
second service of the same type which is formed by a
piece of software with a second release and, if the
releases are different, initiates the transfer of the
15   software with the more up-to-date release to the
communication component (A, B1 - B6, C1 - C6, D1 - D6)
having the software with the earlier release and uses
the transferred software to update the software with
the earlier release there.
20

9.   The method as claimed in one of the preceding
claims,
characterized
in that the service forms the check automatically at
25   regular intervals of time and/or whenever a resource is
used and/or after manual activation.